Avaya™ 3606 Wireless IP Telephone

Installation and Configuration Guide

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Notice
Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

Avaya Web Page
The world wide web home page for Avaya is: http://www.avaya.com

Preventing Toll Fraud
Toll Fraud is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or working on your company's behalf). Be aware that there is a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya Fraud Intervention
If you s*uspect that you are being victimized* by toll fraud and you need technical assistance or support, call the Technical Service Center's Toll Fraud Intervention Hotline at 1.800.643.2353.

Providing Telecommunications Security
Telecommunications security of voice, data, and/or video communications is the prevention of any type of intrusion to, that is, either unauthorized or malicious access to or use of, your company's telecommunications equipment by some party.

Your company's "telecommunications equipment" includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, "networked equipment").

An "outside party" is anyone who is not a corporate employee, agent, subcontractor, or a person working on your company's behalf. Whereas, a "malicious party" is Anyone, including someone who may be otherwise authorized, who accesses your telecommunications equipment with either malicious or mischievous intent.

Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Utilization (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll-facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there could be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company, including but not limited to, human/data privacy, intellectual property, material assets, financial resources, labor costs, and/or legal costs).

Your Responsibility for Your Company's Telecommunications Security
The final responsibility for securing both this system and its networked equipment rests with you – an Avaya customer's system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources including but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure your:

- Avaya provided telecommunications systems and their interfaces
- Avaya provided software applications, as well as their underlying hardware/ software platforms and interfaces
- Any other equipment networked to your Avaya products

Federal Communications Commission Statement
Part 15: Class A Statement. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, could cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Industry Canada (IC) Interference Information
This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of Industry Canada.

Le Présent Appareil Nomérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A préscrites dans le reglement sur le brouillage radioélectrique édicté par le Industrie Canada.

European Union Declaration of Conformity
The "CE" mark affixed to the equipment means that it conforms to the referenced European Union (EU) Directives listed below:

EMC Directive	89/336/EEC
Low-Voltage Directive	73/23/EEC

For more information on standards compliance, contact your local distributor.

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1. About This Document

This document explains how to configure and maintain the 3606 Wireless IP Telephone with an Avaya Call Server (such as an Avaya™ MultiVantage™ on a DEFINITY® Server SI or an Avaya™ S8100 Media Server with CMC1 Media Gateway).

1.1 Contacting Avaya

To access software updates, the most current troubleshooting information, and other important information about the 3606 Wireless IP Telephone, go to **http://avaya.com/support**. If you have questions about or problems with the 3606 Wireless IP Telephone that you cannot resolve after reading this document, contact Avaya Technical Support at 1 800 242-2121 (USA only) or your local authorized Avaya dealer.

1.2 Icons and Conventions

This manual uses the following icons and conventions.

Caution! Follow these instructions carefully to avoid danger.

Note these instructions carefully.

NORM This typeface indicates a key, label, or button on Avaya hardware.

2. 3606 Wireless IP Telephone Overview

The 3606 Wireless Telephone is a mobile handset for workplace IP telephone systems. The Wireless Telephone operates over an 802.11b wireless Ethernet LAN providing users a wireless voice over IP (VoIP) extension. By seamlessly integrating with an Avaya Call Server (such as an Avaya™ MultiVantage™ on a DEFINITY® Server SI and an Avaya™ S8100 Media Server with CMC1 Media Gateway), Wireless Telephone users are provided with high-quality mobile voice communications throughout the workplace. The Wireless Telephone gives users the freedom to roam throughout the workplace while providing all the features and functionality of an IP desk phone.

The 3606 Wireless IP Telephone provides a wireless extension to the Avaya Call Server. The Wireless Telephones reside on the wireless LAN with other wireless devices using Direct Sequence Spread Spectrum (DSSS) radio technology. The handset radio transmits and receives packets at up to 11Mb/s.

A Wireless Telephone must be administered on the Avaya Call Server for the specific features and lines to be accessed by the Wireless Telephone. After the handset is registered, it receives its configuration information from the Avaya Call Server.

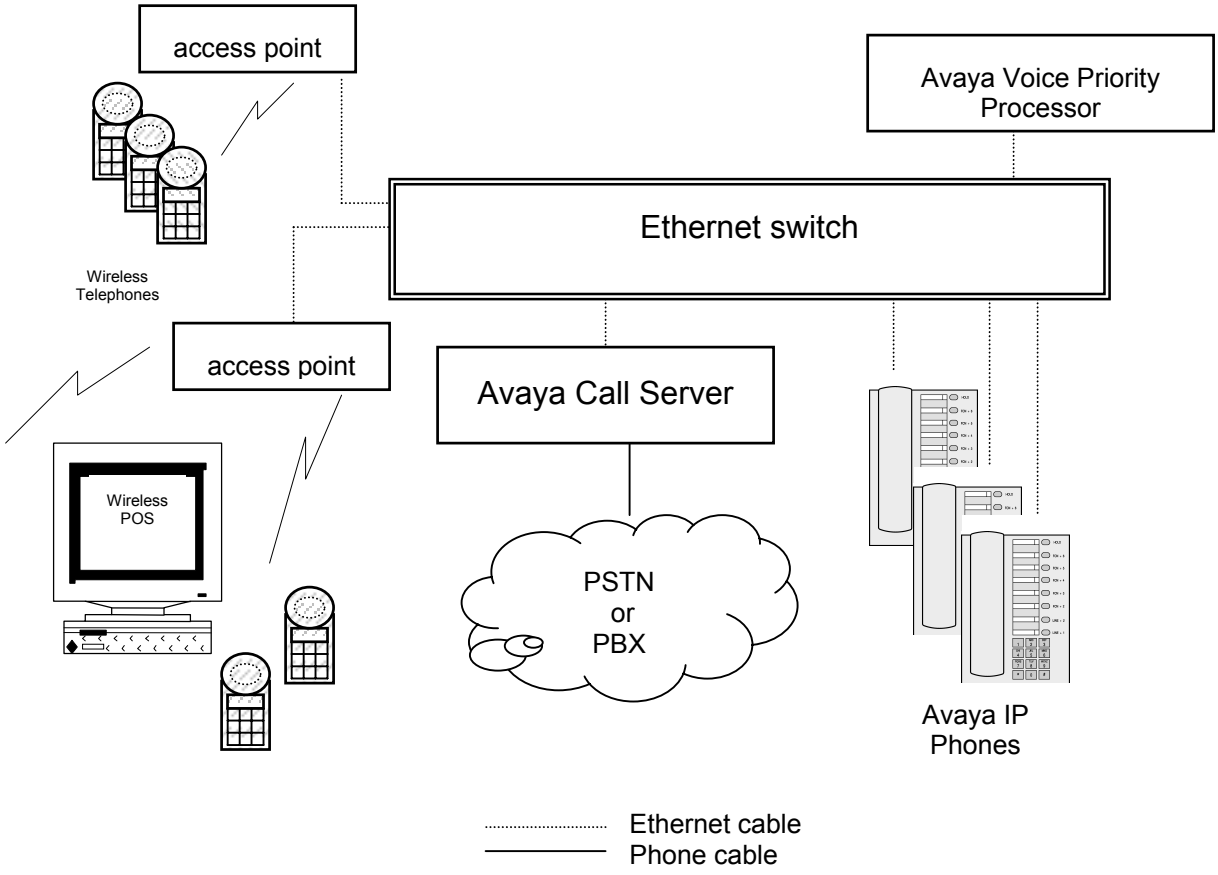
The 3606 Wireless IP Telephone supports Wired Equivalent Privacy (WEP) as defined by the 802.11 specification. Avaya offers the product with both 40-bit and 128-bit encryption. WEP increases the security of the wireless LAN to a level similar to a wired Ethernet LAN.

2.1 Quick Start Guide

1. A wireless LAN must be properly configured and operational through the use of 802.11b wireless access points (APs).
2. A TFTP Server must be available on the network in order to load the appropriate software into the Wireless Telephones. See Section 6 “License Management” for detailed instructions for loading software on Wireless Telephones.
3. The Avaya Call Server must be connected to your network and completely operational.
4. The Avaya Voice Priority Processor, which controls the QoS on the wireless LAN for the Wireless Telephones, must be on the same subnet as the Wireless Telephones and have the proper versions of software. Visit http://avaya.com/support to download the latest Avaya Voice Priority Processor software.
5. Add a station on the Avaya Call Server for each Wireless Telephone. You will administer each Wireless Telephone as an Avaya 4606 IP Telephone.
6. Configure your Wireless Telephone to ensure that it is associated with the Wireless LAN, has the appropriate software and is registered to the Avaya Call Server. See “License Management” for detailed instructions for loading software onto Wireless Telephones.

2.2 System Diagram

The following diagram shows the components residing on a network with the Avaya Call Server, access points (APs), and wireless LAN Ethernet Switched Hub:



2.3 System Components

- **3606 Wireless IP Telephone** – The 3606 Wireless IP Telephone is a lightweight, durable handset specifically designed for mobile workplace use within a facility using the Avaya Call Server and 802.11 APs in a wireless LAN.

  Wireless Telephone functionality is provided by emulating the Avaya 4606 desk set. The Wireless Telephone supports four predefined feature keys and a mixture of six programmable line and feature keys. Among other features, the Wireless Telephone can receive calls directly, receive transferred calls, transfer calls to other extensions, make conference calls, and make outside and long distance calls (subject to the restrictions applied in your facility.) The Wireless Telephones are to be used on-premises; they are not cellular or satellite phones.

  3606 Wireless IP Telephones use direct sequence spread spectrum radio technology (DS) to transmit audio packets over wireless LAN APs that support the Avaya Wireless PC card.

- **Avaya Voice Priority Processor** – SpectraLink Voice Priority (SVP) is the Quality of Service (QoS) mechanism that is implemented in the Wireless Telephone and AP to enhance voice quality over the wireless network. SVP gives preference to voice packets over data packets on the wireless medium, increasing the probability that all voice packets are transmitted efficiently and with minimum or no delay. SVP is fully compliant with the IEEE 802.11 and 802.11b standards.

  The Avaya Voice Priority Processor is an Ethernet LAN appliance that works with the AP to provide QoS on the wireless LAN. All packets to and from the 3606 Wireless IP Telephones pass through the Avaya Voice Priority Processor and are encapsulated for prioritization as they are routed to and from the Avaya Call Server.

  SVP is required for QoS because the current IEEE 802.11b wireless LAN standard provides no mechanism for differentiating audio packets from data packets. This standard is undergoing revision to version 802.11e to provide all the functionality of SVP in an industry standard thus ensuring high-quality voice in a mixed client environment. Once 802.11e is ratified, Avaya and its 802.11 technology partners will adopt the new specification. When the 802.11e specification replaces SVP, the Wireless Telephones can be upgraded and the Avaya Voice Priority Processor can be removed from the system.

- **Avaya Call Server** – the call-processing component of the Avaya IP telephony solution.

- **Access Points** – provide the connection between the wired Ethernet LAN and the wireless (802.11) LAN. Access points must be positioned in all areas where Wireless Telephones will be used. The number and placement of access points will affect the coverage area and capacity of the wireless system. Typically, the requirements for use of 3606 Wireless IP Telephones are similar to that of wireless data devices.

- **Ethernet Switch** – interconnects multiple network devices, including the Avaya Voice Priority Processor, Avaya Call Server, Avaya IP Phones and the access points. Ethernet switches provide the highest performance networks, which can handle combined voice and data traffic, and are required when using the 3606 Wireless IP Telephones.

  Although a single Ethernet switch network is recommended, the Wireless Telephones and the Avaya Voice Priority Processor can operate in larger, more complex networks, including networks with multiple Ethernet switches, routers, VLANs and/or multiple subnets. However, in such networks, it is possible for the Quality of Service (QoS) features of the Avaya Voice Priority Processor to be compromised and voice quality may suffer. Any network that consists of more than a single Ethernet switch should be thoroughly tested to ensure any quality issues are detected.

  Note that the 3606 Wireless IP Telephones cannot “roam” from one subnet to another. If routers and multiple subnets are in use, the Wireless Telephones must only use access points attached to a single subnet, or be powered off and back on to switch to a different subnet.

- **Avaya IP Phone** – The wired-LAN desk sets provided by Avaya for use with the Avaya Call Server.

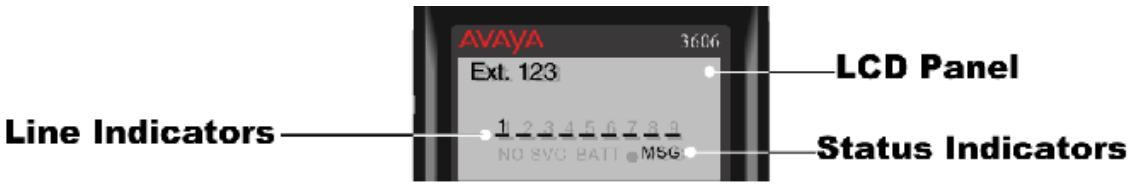
- **TFTP Server** – Required in the system to distribute software to the Wireless Telephones.

3. The 3606 Wireless IP Telephone

3.1 Specifications

Radio frequency	2.4000 – 2.4835 GHz
Transmission type	Direct Sequence Spread Spectrum (DSSS)
Transmit data rate	up to 11 Mb/s
Radio QoS	SpectraLink Voice Priority (SVP)
Wireless security	Wired Equivalent Privacy (WEP), 40bit and 128bit
FCC certification	Part 15.247
Management	DHCP, TFTP
Voice encoding	G.711
VoIP Protocols	CCMS
Transmit power	100 mW peak, < 10 mW average
Display	2 x 16 character alphanumeric, plus line and status indicators
Dimensions	5.9 “ L x 2.0” W x 1.0 “ D
Weight	6.0 ounces, maximum
Battery capacity	2 hours talk time, 80 hours standby

3.2 The Display



Alphanumeric

The 3606 Wireless IP Telephone display has two lines capable of displaying 16 alphanumeric characters each. Display information provided by the Avaya Call Server when the Wireless Telephone is off-hook will be passed directly to the Wireless Telephone display. The Wireless Telephone will emulate the 4606 display handling. Certain characters may be used by the Avaya Call Server that are not implemented in the Wireless Telephone such as definable and special characters.

MSG Icon

The message-waiting icon (**MSG**) is activated in a similar fashion as the message indicator of the display set. The Message Waiting feature must be assigned to a button in order to support the message-waiting icon.

Ringing and Tones

The ringing types (normal or vibrator) are programmed by the Wireless Telephone user into the Wireless Telephone and are not accessible or changeable by the Avaya Call Server. Whenever possible the audible and vibrating ringer on the Wireless Telephone will follow the command provided by the Avaya Call Server.

Audio Features

The Avaya IP Phone Model 4606 speakerphone features will not be made available on the Wireless Telephone.

Line Indicators

The line indicators on the Wireless Telephone will illuminate to mimic the LEDs next to Line keys on the Avaya 4606. Note, however, that the Wireless Telephone will indicate line numbers based on the order line assignments are received from the Avaya Call Server, regardless of which button the line is assigned to during system administration.

4. Avaya Call Server Configuration

You can configure the 3606 Wireless Telephone as a stand-alone station or associate it with a desk station. When the 3606 Wireless Telephone is associated with a desk station, the user can make and handle calls from either the 3606 Wireless Telephone or the desk station.

4.1 Configuring a Standalone Station

To configure a 3606 Wireless Telephone as a stand-alone station, you must add a station on the Avaya Call Server for the 3606 Wireless Telephone.

To administer a stand-alone station on the Avaya Call Server for a Wireless Telephone:

1. From the Avaya Call Server administration software, add a new station.
2. Set “Type” to “4606.”
3. Complete the remainder of the station form as you would for a desk station.
4. Repeat Steps 1 through 3 for each stand-alone Wireless Telephone.

4.2 Configuring an Associated Station

To configure a 3606 Wireless Telephone as an associated station, you must add a station on the Avaya Call Server for the 3606 Wireless Telephone and then associate that station with a desk station.

To administer an associated station on the Avaya Call Server for a Wireless Telephone:

1. From the Avaya Call Server administration software, add a new station.
2. Set “Type” to “4606.”
3. Set “Security Code” to the same security code used for the extension to which this Wireless Telephone will be associated (that is, the desk station). You can use a different security code, but to make it easier for the user it is recommended that you use the same security code as the desk station.
4. Set “Message Lamp Ext” to the extension of the associated desk station.
5. Set “Bridged Call Alerting” to “y.”
6. Set “Auto Select Any Idle Appearance” to “y.”
7. For Button Assignments, create bridged appearances to the line appearances on the desk station.
8. Add additional feature buttons to buttons 4 and 5, if desired.
9. Repeat Steps 1 through 8 for each Wireless Telephone.

When making changes to feature buttons, the phone must be power cycled.

5. 3606 Wireless IP Telephone Configuration

The Wireless Telephone can be automatically configured for IP address and/or ESSID by enabling DHCP and/or ESSID Learning, respectively.

If any of the Wireless Telephone's default settings need to be changed, the following procedure should be followed.

5.1 Opening and Using the Admin Menu

The Admin menu contains configuration options that are stored locally (on each Wireless Telephone). Every Wireless Telephone is independent and if the default settings are not desired, the admin options must be set in each Wireless Telephone requiring different settings.

1. With the Wireless Telephone powered OFF, simultaneously press and hold the **PWR** and **END** keys.
2. After hearing three beeps, release the **PWR** key, then release the **END** key. The first option on the Admin menu displays.

If an admin password has been set, the display will require its entry before opening the Admin menu. If no password is set, the display will proceed directly into the Admin menu.

3. Press the left or right arrow keys (**#** and *****) on the Wireless Telephone to scroll through the menu options.
4. Press **0** (zero) to change the selected option.
5. Press **FCN** to return to the previous menu level.
6. Press **END** to exit the menus.

An asterisk (*) next to an option indicates that it is selected. The default settings are shown below with an * prior to the option.

The following table lists the Admin menu items. Detailed descriptions of each item appear below the table.

Admin Menu Items	2nd Level	3rd Level
IP Address	Use DHCP	
	Static IP	Phone IP TFTP Server IP OAI Server IP Default Gateway Subnet Mask SVP Server IP
ESS ID	Static Entry	
	Learn Once	
	Learn Always	
License Management	Set Current	
Restore Defaults		
Site Survey Mode		
Regulatory Domain		
Encryption	Authentication	Open System Shared Key
	WEP	On/Off
	Key Information	Default Key Key Length Key #
Admin PW		
Ext.		
Password		
Avaya Call Server IP		

IP Address

There are two modes in which the Wireless Telephone can operate: DHCP enabled or Static IP. Select the mode for operation from the IP Address menu:

*** Use DHCP**: will use Dynamic Host Configuration Protocol to assign an IP address each time the Wireless Telephone is turned on. If DHCP is enabled, the Wireless Telephone also receives all other IP address configuration from the DHCP server.

Static IP: allows you to manually set a fixed IP address. If selected, the Wireless Telephone will prompt for the IP addresses of each configurable network component. When entering addresses, enter the digits only, including leading zeroes. No periods are required.

Regardless of the mode in which the Wireless Telephone is operating, the following components must be configured:

Phone IP – the IP address of the Wireless Telephone. This is automatically assigned if DHCP is used. If using Static IP configuration, you must obtain a unique IP address for each phone from your network administrator.

SVP Server IP – the IP address of the Avaya Voice Priority Processor. If using Static IP configuration, this is simply the IP address of the Avaya Voice Priority Processor. Note that the Avaya Voice Priority Processor must be statically configured to have a permanent IP address. If DHCP is being used, the Wireless Telephone will try the following, in order: the DHCP option 151, then a DNS lookup of "SLNKSVP2" if the DHCP options 6 (DNS Server) and 15 (Domain Name) are configured.

The following components may be configured optionally:

TFTP Server IP – the IP address of a TFTP server on your network which holds software images for updating the Wireless Telephones. If this feature is configured (not set to 0.0.0.0 or 255.255.255.255) with either Static IP configuration or using DHCP option 66 (TFTP Server), or the Boot server/next server (siaddr) field, the Wireless Telephone will check for newer software each time it is powered on or comes back into range of your network. This check takes only a second and ensures that all Wireless Telephones in your network are kept up-to-date with the same version of software.

OAI Server IP – the IP address of the NetLink OAI Gateway. If using static IP configuration, this is simply the IP address of the NetLink OAI Gateway. If DHCP is being used, the Wireless Telephone will try the DHCP option 152.

Default Gateway and Subnet Mask – used to identify subnets, when using a complex network which includes routers. Both of these must be configured (not set to 0.0.0.0 or 255.255.255.255) for the Wireless Telephone to contact any network components on a different subnet. They can be set using either Static IP configuration or via DHCP options 3 (Default Gateway) and 1 (Subnet Mask) respectively. Contact your network administrator for the proper settings for your network. Note that the Wireless Telephones cannot "roam" across subnets, since they cannot change their IP address while operational. Ensure that all your access points are attached to the same subnet for proper operation. The Wireless Telephone can change subnets if DHCP is enabled, and the Wireless Telephone is powered off then back on when within range of access points on the new subnet.

ESSID

Select the option that will enable the Wireless Telephone to acquire APs with the correct ESSID (Extended Service Set ID, aka SSID) each time it is turned on.

Note about Automatic Learn options: Broadcast ESSID must be enabled in the access points for ESSID learning to function. Refer to the *Configuration Note* for your access point or call your access point vendor for specifics. Overlapping wireless systems complicate the use of ESSID learning as the Wireless Telephone in an overlapping area could receive conflicting signals. If this is the situation at your site, use Static Entry or Learn Once in an area with overlapping ESSIDs.

*** Learn Once**: allows the Wireless Telephone to scan all ESSIDs for a DHCP server and/or TFTP server. Once either is found, the Wireless Telephone retains the ESSID from whichever access point it associates with at that point. When overlapping wireless systems exist, the Learn Once feature allows the Wireless Telephone to use only the ESSID established at first learn at all subsequent power ons. This ESSID is retained by the Wireless Telephone until the ESSID option is reselected.

Learn Always: allows the Wireless Telephone to automatically learn the ESSID at each power on or loss of contact with the wireless LAN (out of range). This may be useful if the Wireless Telephone will be used at more than one site.

Static Entry: If your access points do not accept broadcast ESSID or if there are overlapping wireless systems in use at the site, enter the correct ESSID manually:

1. On the keypad, press the first digit/letter of the ESSID. The digit displays. Press the key again to scroll through the letters associated with that key.

   Example: if you press 2 repeatedly, you will see 2, A, B, and C, a, b, and c.

   The following table shows which key will allow you to enter non-numeric characters or other characters not represented on the keypad.

To Enter	Press
. - _ ! # $ % & ‘ ( ) , : ; / \ = @ ~	1
Space	0
Q q	7
Z z	9

   When the correct entry displays, press Right Arrow to move on to the next character. Repeat for each digit/letter of the ESSID.

2. Press **END** to save the entry and return to the menu.
   Press **FCN** to abort and return to the menu without saving any changes.

License Management

License Management lets you select the VoIP protocol that your site is licensed to download and run. The currently available protocols are:

Option	Protocol	Use with
001	SpectraLink Radio Protocol (SRP)	NetLink Telephony Gateways
006	CCMS	Avaya Call Server

3. Press **0** to view the current selection. The protocol number appears on the display.
4. Press **0** to change the protocol.
5. Press the right arrow to scroll through the options.
6. Press **0** to select the displayed protocol number.

After selecting the correct protocol for your site, you should upgrade the software for the phones. See *Upgrading Wireless Telephones* section for more information.

Restore Defaults

The Restore Defaults option will set all user and administrative parameters to their factory defaults. During configuration, press Right Arrow to skip this mode.

Site Survey Mode

Site Survey Mode is used to check the signal strength from access points. When you select Site Survey Mode, the Wireless Telephone will remain in this mode until it is powered off. During configuration, press Right Arrow to skip this mode. See Certifying the 3606 Wireless IP Telephone (Section 7) for more information on this mode.

Regulatory Domain

The Regulatory Domain will default to North America on the Wireless Telephone display. FCC requirements dictate that the menu for changing the domain be available by password, which in our case is the **HOLD** button. To change the domain, press **HOLD** and then enter the digits that represent the site's domain. Note that both digits must be entered.

01 - North America

02 - Europe (except Spain and France)

03 - Japan

04 - Spain

05 – France

Note: as of this writing, Spain and France are adopting the general European Regulatory rules. Check with you wireless LAN administrator or supplier for which domain to enter in these countries.

Encryption

WEP (Wired Equivalent Privacy) is a wireless encryption protocol that scrambles wireless signals allowing for greater security in the wireless network. If WEP/Encryption is required at this site, you must configure each Wireless Telephone to correspond with the encryption protocol set up in the access points. Select the entries from the options below to enable the Wireless Telephone to acquire the system.

* By default, WEP options are off. If WEP is desired, options must be set in the Wireless Telephone that match those set in the APs.

Set each of these options to match exactly the settings in your APs.

Authentication
Select either **Open System** or **Shared Key**.

WEP
Select either **WEP Off** or **WEP On**.

Key Information
Press the right arrow key to scroll through the options:

Default Key: Enter the key # specified for use by the Wireless Telephones. This will be 1 through 4.

Key Length: Select either **40-bit** or **128-bit** depending on the key length specified for use at this location.

Key 1-4: Scroll to the key option that corresponds to the **Default Key** that was entered above. Press 0 and enter the encryption key as a sequence of hexadecimal characters. (Use the **2** and **3** keys to access hexadecimal digits A-F, use the left arrow key to backspace.) For 40-bit keys you will need to enter 10 digits, for 128-bit keys you will need to enter 26 digits. The display will scroll as needed.

Encryption codes display as they are entered. For security reasons codes will not display when a user returns to the Admin menu, Encryption options.

Note that WEP may be set to "optional" at the AP if there are wireless devices in use that do not have WEP capability. All wireless devices must be upgraded to WEP capability for a fully secured WEP environment.

Admin PW

The Admin PW (password) controls access to the administration functions in the Admin menu. The password must be set in each Wireless Telephone for which controlled access is desired. Wireless Telephones are shipped without any Admin menu password.

1. On the keypad, press 0 to change the password.
2. Enter the password. Press the first digit/letter of the password. The digit displays. Press the key again to scroll through the letters associated with that key.

   Example: if you press 2 repeatedly, you will see 2, A, B, and C, a, b, and c.)

   The following table shows which key will allow you to enter non-numeric characters or other characters not represented on the keypad.

To Enter	Press
. - _ ! # $ % & ‘ ( ) , : ; / \ = @ ~	1
Space	0
Q	7
Z	9

   When the correct entry displays, press Right Arrow to move on to the next character. Repeat for each digit/letter of the password.

3. Press **END** to save the entry and return to the menu.
   Press **FCN** to abort and return to the menu without saving any changes.

If you press **END** with no entry, the password is erased and the display will not require it before displaying the Admin menu.

Ext.

Each 3606 Wireless Telephone must have an extension assigned to it, as well as having the same extension administered in the Avaya Call Server. This extension is used to register the Wireless Telephone with the Avaya Call Server.

1. Press **0** (zero) to enter a new extension.
2. Press **END** when done.
3. Press **FCN** to quit without changes.

Password

Each 3606 Wireless Telephone must have a password entered into it that matches the password administered in the Avaya Call Server.

1. Press **0** (zero) to enter a new password.
2. Press **END** when done.
3. Press **FCN** to quit without changes.

Avaya Call Server IP

This option is displayed only when the CCMS Mode is set to static.

1. Press **0** (zero) to enter a new IP.
2. Press **END** when done.
3. Press **FCN** to quit without changes.

5.2 User-defined Preferences

The following user-defined preferences are also covered in the 3606 Wireless IP Telephone user guide. The system administrator can refer to this list for more information about customizing Wireless Telephone settings.

To configure the following options, the Wireless Telephone must acquire the system (the **NO SVC** icon must be off) and be at the extension display. Press and hold **FCN** briefly to access the following options:

Select **Volume Level** from the menu to set the base audio volume level of this Wireless Telephone. Select a level from 1 (softest) to 8 (loudest). Level 5 is the default.

Select **Ring Type** then **Telephone Ring** to change the standard ring used for normal operation. From the **Telephone Ring** menu, select either **Normal Ring** (an audible alert) or **Vibrator Ring**. The **Auxiliary Ring** modes are reserved for future use. Vibrator ring works only if this Wireless Telephone has the optional vibrating ringer. The ring type currently in use displays with an asterisk (*).

Select **High Noise Mode** from the menu to select an option that describes the noise level in your environment. This option will adjust the Wireless Telephone to account for background

noise. Use of the non-Normal Noise modes is not recommended unless you are in a loud environment, or you may find it difficult to be heard on your Wireless Telephone.

Current IP Address: displays the IP address currently assigned to the Wireless Telephone. The IP address is not set here, it is merely displayed.

Avaya Call Server IP: displays the IP address of the Avaya Call Server with which the Wireless Telephone is registered.

6. License Management

The 3606 Wireless IP Telephone system supports a number of different IP protocol integrations. All 3606 series Wireless Telephones are shipped from Avaya with a generic software load that allows them to associate to a wireless LAN and download their functional software from a TFTP server. **The Wireless Telephones will not function properly without downloading appropriate software.**

The following details the process to properly configure 3606 Wireless IP Telephone and download software via over-the-air file transfer.

6.1 Requirements

- A wireless LAN must be properly configured and operational through the use of 802.11b wireless access points.
- The Avaya Call Server must also be connected to your network and completely operational.
- A TFTP Server must be available on the network in order to load the appropriate software into the Wireless Telephones.
- Finally, ensure that the Battery Pack on the Wireless Telephone is fully charged.

6.2 Configuration Process

1. Download the latest 3606 Wireless IP Telephone – IP software from http://avaya.com/support.
2. Load the latest version of the 3606 Wireless IP Telephone code and place it on the TFTP Server and ensure the TFTP Server is started. The two files that are needed must be named *pd06ccc.bin* and *slnk_cfg.cfg*.
3. If statically assigning IP addresses, ensure that the **IP Address**, **TFTP Server IP, Subnet Mask**, and **Default Gateway** information are accurate in the Admin Menu. If using a DHCP Server, ensure that appropriate options are set for the TFTP Server. See "3606 Wireless IP Telephone Configuration" section for detailed configuration instructions.
4. Ensure the Wireless Telephone has properly configured **ESSID** and **Reg Domain** Information within the Admin Menu. If you are accepting broadcast **ESSIDs** at your access points, the handset will automatically learn the ESSID information when powering on. See "3606 Wireless IP Telephone Configuration" section for detailed configuration instructions.
5. Using the Admin Menu on the Wireless Telephone, ensure the **License Mngt** menu option is set to **006**. This ensures the handset will check for the proper software files each time it powers on. See "3606 Wireless IP Telephone Configuration" section for detailed configuration instructions.
6. Power cycle the Wireless Telephone.
7. The code will now download to the handset. The status bar will increment fully across the display for each function that is being performed in the download process. Upon completion of the update process, the handset will re-boot with the new firmware.

8. Register the Wireless Telephone with the Avaya Call Server and properly configure the handset with the appropriate extension and password.

For future software upgrades, simply update the files that are stored on the TFTP Server. Each time the Wireless Telephone is powered up, it will check with the TFTP Server to ensure it has the proper software version.

7. Avaya Call Server Integration Factors

This section describes the mapping between the emulated Avaya IP Phone Model 4606 and the 3606 Wireless IP Telephone.

Voice Messaging Access

Voicemail is accessed on the Wireless Telephone as **FCN** + a character that corresponds to the administered button (**FCN** + ***** or **FCN** + **#**).

CODECs

The 3606 Wireless IP Telephone is only compatible with the G.711 codec at this time. If the wrong codec is issued, there will be no voice path.

DHCP

Dynamic Host Configuration Protocol (DHCP) is a standardized protocol that enables clients to be dynamically assigned with various configuration parameters, such as an IP address, subnet mask, default gateway, and other critical network configuration information. DHCP servers centrally manage such configuration data, and are configured by network administrators with settings that are appropriate for a given network environment. The Wireless Telephone will use the following DHCP options if DHCP use is enabled:

Option	Meaning
1	Subnet Mask
3	Default Gateway
6	DNS Server
15	Domain Name
66	TFTP Server
151	Avaya Voice Priority Processor
152	NetLink OAI Gateway
siaddr	Boot server or next server

TFTP

The Wireless Telephone uses TFTP to update its software over the 802.11 wireless LAN.

DNS

Domain Name System (DNS), an industry-standard protocol, locates computers on an IP-based network. IP networks rely on number-based addresses to move information on the network. However, users are better at remembering friendly names than number-based addresses, so, it is necessary to translate user-friendly names into addresses that the network can recognize. The Wireless Telephone

will use DNS to automatically translate names into IP addresses for these components: TFTP Server, Avaya Voice Priority Processor.

Extension Override

The Avaya Call Server will detect when a Wireless Telephone tries to register with the same extension as any telephone that is already registered to that extension. If this happens, the Wireless IP Phone will display:

Extension in use
 # to continue

Press **#** to continue.

The Wireless Telephone will display:

Ext. =XXX
#=OK New =

At this point, a new extension can be entered, or if the **#** key is pressed, the Wireless Telephone will retain the current extension. If a new extension is entered, it will be lost when the Wireless Telephone is powered off, and the Wireless Telephone will use the extension originally entered via the administration menu.

After a new extension is entered, press **#** to continue.

The Wireless Telephone will then display:

Password = ******
= OK**

A new password can be entered at this time, or if the **#** key is pressed, the Wireless Telephone will continue with its current password. If a new password is entered, it will be lost when the Wireless Telephone is powered off, and the Wireless Telephone will use the password originally entered via the administration menu.

After a new password is entered, press **#** to continue.

If the user chooses to continue on with the override information, the Wireless Telephone will register with the override bit set. Any telephone currently registered with the given extension will be unregistered, and any activity on the currently registered telephone will be stopped. If that telephone is in a call, it will be dropped.

If the user does not want to override the existing extension, or enter a different extension for temporary use, simply power off the Wireless Telephone to cancel the override.

If two Wireless Telephones are assigned to the same extension, the Avaya Call Server will not properly resolve the registration conflict due to the presence of the Avaya Voice Priority Processor. Both Wireless Telephones may fail to operate properly.

8. Feature Programming

The 3606 Wireless IP Telephone emulates the Avaya 4606. This set supports line appearances and has the following keys:

- Six programmable keys
- Dedicated Mute, Speakerphone, Hold, Transfer, Conference and Redial buttons
- Adjustable speaker volume control
- Adjustable ringer volume control

All telephone functions and messaging features are supported if possible. Functions that require the use of the volume keys are not supported, nor are Speakerphone functions.

The first four **FCN** keys are permanently assigned per the table below. Other **FCN** keys can be programmed via the Avaya Call Server. If the Wireless Telephone is associated with a desk station, the button features administered for the desk station are assigned to the remaining **FCN** keys. The keypad mapping for each 3606 Wireless IP Telephone is administered through the Avaya Call Server administration software (for example, Avaya MultiVantage Configuration Manager). Programmable keys are accessed by pressing the **LINE** or **FCN** key on the Wireless Telephone, followed by the appropriate digit key. The second column of the table is provided for you to note your actual mappings.

Wireless Telephone Key Sequence	Assigned Function
FCN + 1	Mute
FCN + 2	Last Num Dialed
FCN + 3	Transfer
FCN + 4	Conference
FCN + *	
FCN + #	

Note that assigned lines can be accessed by the key sequence **LINE** + a digit, where the digit is the order in which the line has been received from the Avaya Call Server. This is true regardless of which button is associated with the line.

E.g. If line 1 is assigned to Programmable Key 1, **LINE** + **1** will access line 1. If line 2 is then assigned to Programmable Key 4, **LINE** + **2** will access line 2.

Changes to feature programming will take effect when the Wireless Telephone is powered off and back on again.

If an Open Application Interface (OAI) is operational, a function key sequence will be assigned in the OAI configuration and will override any function sequence established here.

9. Testing a Wireless Telephone

Verify proper registration and operation of each Wireless Telephone by performing the following tests on each Wireless Telephone in an active wireless area.

1. Power on the Wireless Telephone by pressing **PWR**. You will see a series of messages displayed as the Wireless Telephone acquires the system. The Wireless Telephone should display the user extension. The **NO SVC** icon should clear.
2. Press the **START** key. The extension number should be replaced by information from the Avaya Call Server and you should hear dial tone. Place a call and listen to the audio quality. End the call by pressing the **END** key.
3. Place a call to the Wireless Telephone and verify ring, answer, clear transmit, and clear receive audio.
4. Press the **START** key.
5. Use the **FCN** key to verify all programmed features on the Wireless Telephone, and press **END** when finished.
6. Use the **LINE** key to verify the programmed line appearances, and press END when finished.
7. Press the **END** key. Any line indicators should turn off and the extension number display will return.

10. Certifying the 3606 Wireless IP Telephones

Conduct a preliminary Site Survey Mode test according to the directions given below. Note any areas where coverage is conflicting or inadequate. Note any system difficulties and work with your wireless LAN and/or LAN system administrator to determine the cause and possible remedy. See the section *Wireless Telephone Problems* for clues to possible sources of difficulties.

10.1 Site Certification

The installer should not leave the site before performing installation verification.

These tests must be performed in typical operating conditions, especially if heavy loads occur. Testing sequence and procedure is different for every installation. Generally, you should organize the test according to area and volume, placing numerous calls to others who can listen while you perform coverage tests. Note any areas with excessive static or clarity problems and report it to an Avaya engineer.

The coverage test will also require you to put the Wireless Telephone in **Site Survey** mode and walk the entire coverage area to verify all access points.

The installation is not complete until these certification steps have been performed. Do not hand out Wireless Telephones at a site that has not been certified.

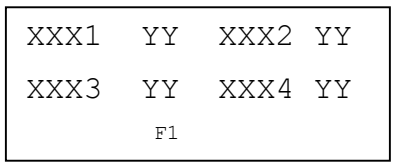
10.2 Site Survey Mode

Test signal strength in the covered area by performing a Site Survey. Put a Wireless Telephone in Site Survey mode (see *Wireless Telephone Configuration* section) and walk the entire coverage area while viewing the display.

The **Hold** key toggles between the two coverage modes described below. The Wireless Telephone will remain in Site Survey mode until it is powered off. When testing is complete, press **PWR** to power off the Wireless Telephone.

Detect dBm coverage

As you walk the perimeter, the two-line display will show the top four access points that the Wireless Telephone can contact in a code as illustrated below.



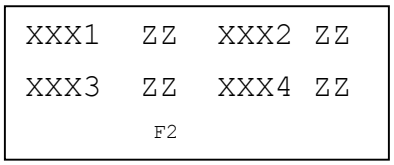
- XXX1 through XXX4 are the last four digits of the access points' MAC address. The primary access point (the access point which had the strongest signal to this Wireless Telephone) displays first, followed by the three access points with the next strongest signals.

- YY is the power level in dBm at which this Wireless Telephone heard the associated access point. Although shown as a positive number, YY represents negative dBm and lower numbers represent stronger signals. For example, a displayed value of 40 indicates –40dBm, and is therefore a stronger signal then a display of 50 (which indicates –50dBm). At least one access point's reading should be stronger than -70 dBm in all areas.

Note any areas that have inadequate dBm readings.

Detect overlap or conflicts

Press **HOLD** to toggle to the Site Survey function that shows the channel number of the access points. Use this information to detect overlaps or conflicts in access point signaling.



- XXX1 through XXX4 are the last four digits of the access points' MAC address.
- ZZ is the channel number that the access point is using.

Note any areas that have access points that are in contention for the same channel.

It is preferable that no overlaps exist anywhere in your facility. If that is not possible, then any location that shares two APs with the same channel should also show at least 2 APs with stronger signals, that do not conflict.

10.3 Solving Coverage Issues

Coverage issues are best resolved by adding and/or relocating APs.

Overlap issues may be resolved by reassigning channels to the APs or by relocating the APs.

11. Software Maintenance

The 3606 Wireless IP Telephones use proprietary software programs maintained by Avaya. The software versions that are running on the Wireless Telephones can be displayed during power on by holding down the **PWR** button.

Avaya or its authorized dealer will provide information about software updates and how to obtain the software (for example, downloading from a web site).

11.1 Upgrading Wireless Telephones

After software updates are obtained from Avaya, they must be transferred to the appropriate location in the LAN to update the code used by the Wireless Telephones.

3606 Wireless IP Telephones allow over-the-air transfer of software updates from the designated TFTP server to the Wireless Telephones. The downloader function in the Wireless Telephone checks its software version every time the Wireless Telephone is turned on. If there is any discrepancy the Wireless Telephone immediately begins to download the update.

Normal Download Messages

When the Wireless Telephone is powered on, it displays a series of messages indicating that it is searching for new software, checking the versions, and downloading. The normal message progression is:

Message	Description
Checking Code	Wireless Telephone is contacting the TFTP Server to determine if it has a newer version of software that should be downloaded.
Erasing Memory	Wireless Telephone has determined that a download should occur and is erasing the current software from memory. This message also displays a progress bar. When the progress bar fills the display line the erase operation is complete.
Updating Code	Wireless Telephone is downloading new software into memory. The number icons at the bottom of the display indicate which file number is currently being downloaded. This message also displays a progress bar. When the progress bar fills the display line the update operation is complete on that file.

While the Wireless Telephone is updating, the **NO SVC** message displays.

When the update is complete, the Wireless Telephone displays the extension number, and is ready for use.

Download Failure or Recovery Messages

The following display messages indicate a failure or recovery situation during the download process.

Message	Description
Server Busy	Wireless Telephone is attempting to download from a TFTP Server that is busy downloading other phones and refusing additional downloads. The Wireless Telephone will automatically retry the download every few seconds.
TFTP ERROR(x):yy	a failure has occurred during the TFTP download of one of the files. (x) = The file number which was being downloaded; yy is an error code describing the particular failure. Possible error codes are: 01 = TFTP server did not find the requested file. 02 = Access violation (reported from TFTP server). 07 = TFTP server reported "No such user" error. Check the TFTP server configuration. 81 = File put into memory did not CRC. The Wireless Telephone will attempt to download the file again. FF = Timeout error. TFTP server did not respond within a specified period of time.
Erase Failed	Download process failed to erase the memory in the Wireless Telephone. This operation will retry.
Waiting	Wireless Telephone has attempted some operation several times and failed, and is now waiting for a period of time before attempting that operation again.

12. Troubleshooting Wireless Telephone Problems

Wireless Telephones can exhibit transmission problems in several ways. They can cease functioning properly, display error messages, or display incorrect data. When using and troubleshooting Wireless Telephones, consider the following problem sources to determine the best method of approaching any specific situation.

12.1 Access Point Problems

Most, but not all, Wireless Telephone audio problems have to do with access point range, positioning and capacity. Performing a Site Survey as described in the *Setup and Maintenance* document can isolate the AP causing these types of problems. If the Wireless Telephone itself is suspected, conduct a parallel Site Survey with a Wireless Telephone that is known to be properly functioning.

In range/Out of range – service will be disrupted if a user moves outside the area covered by the wireless LAN access points. Service is restored if the user moves back within range. If a call drops because a user moves out of range, the Wireless Telephone will recover the call if the user moves back into range within a few seconds.

Capacity – in areas of heavy use, the call capacity of a particular AP may be filled. If this happens, the user will hear three chirps from the Wireless Telephone. The user can wait until another user terminates a call, or move within range of another AP and try the call again. If a user is on a call and moves into an area where capacity is full, the system attempts to find another AP. Due to range limitations, this may be the same as moving out of range.

Transmission Obstructions –prior to system installation, the best location for APs for optimum transmission coverage was determined. However, small pockets of obstruction may still be present, or obstructions may be introduced into the facility after system installation. This loss of service can be restored by moving out of the obstructed area, or by adding APs.

12.2 Configuration Problems

Certain problems are associated with improper configuration of either the Avaya Call Server or the Wireless Telephone. Configuration problems are generally corrected by changing the configuration at the Avaya Call Server or on the Wireless Telephone. See the sections “Avaya Call Server Configuration” and “3606 Wireless IP Telephone Configuration” for specific configuration steps. There may also be incorrect programming of the AP. See the *Configuration Note* for the AP in use at the site.

If the Avaya Call Server registration fails, note any error messages on the display including which line icons are active. This information will help with the problem resolution.

12.3 Wireless Telephone Status Messages

Wireless Telephone status messages provide information about the 3606 Wireless IP Telephone's communication with the AP and host telephone system. The following table summarizes the status messages, in alphabetical order.

Message	Description	Action
3 chirps	Wireless Telephone is not able to communicate with the best AP, probably because that AP has no bandwidth available.	None. This is only a warning, the call will handoff to the best AP once it becomes available.
ASSERTxxx.c Line yyy	The Wireless Telephone has detected a fault from which it cannot recover.	Record the error code so it can be reported. Turn the Wireless Telephone off then on again. If error persists, try registering a different Wireless Telephone to this telephone port. If error still persists, contact Avaya Technical Support and report the error.
Bad Config	Some needed configuration parameter has not been set	Check all required Wireless Telephone configuration parameters for valid settings
Bad ESSID	The Wireless Telephone is configured for “static ESSID” (as opposed to “Learn once” or “Learn always” and no ESS ID has been entered.	Enter an ESSID in the configuration settings or change to one of the “Learn” modes.
BATT, Low Battery, and beep	Low battery	In call: BATT displays when the user is on the Wireless Telephone and the battery charge is low. User has two minutes to complete call. Not in call: Low Battery and Beep indicate low battery charge when user is not on the Wireless Telephone. The Wireless Telephone will not work until battery is replaced.
Checking Code	Wireless Telephone is contacting the TFTP Server to determine if it has a newer version of software that should be downloaded.	None, this message should only last for approximately one second. If message remains displayed, power off and contact customer support for a replacement phone.
Checking DHCP IP	The Wireless Telephone is retrieving DHCP information from the DHCP server	None. This is informational only.
	There is no voice path.	Verify that the CODEC is G.711.

Message	Description	Action
	Messages are left at the principal station, but the MSG icon is not lit on the Wireless Telephone.	Verify that “Message Lamp Ext” on the station form for the Wireless Telephone is set to the extension of the principal station.
CRC Code Error	The software which has been TFTP downloaded has a bad redundancy code check	Try the download again, it is possible the software was corrupted during download. If the error repeats, check that the download image on the TFTP server is not corrupted.
Code Mismatch!	The software loaded into the Wireless Telephone is incorrect for this model phone	Replace the software image on the TFTP server with software that is correct for the phone model.
DHCP Error (1-4)	DHCP Error 1	The Wireless Telephone cannot locate a DHCP server. It will try every 4 seconds until a server is located.
	DHCP Error 2	The Wireless Telephone has not received a response from the server for a request to an IP address. It will retry until a server is found.
	DHCP Error 3	The server refuses to lease the Wireless Telephone an IP address. It will keep trying.
	DHCP Error 4	The server offered the Wireless Telephone a lease that is too short. The minimum acceptable lease is 24 hours. The Wireless Telephone will stop trying. Reconfigure the server and power cycle the Wireless Telephone.
DHCP Lease Exp	The Wireless Telephone’s DHCP lease has expired, and the call (if any) cannot continue.	The Wireless Telephone failed to renew its DHCP lease, either because the DHCP server is not running, or because the configuration has been changed by the administrator. The Wireless Telephone will attempt to negotiate a new lease, which will either work, or change to one of the above DHCP errors (1-4).
DHCP NACK error	A NACK (Negative ACKnowledge) was received from the DHCP server	The DHCP lease currently in use by the Wireless Telephone is no longer valid, which forces the Wireless Telephone to restart. This problem should resolve itself on the restart. If it does not, the problem is in the DHCP server.

Message	Description	Action
DO NOT POWER OFF	The Wireless Telephone is in a critical section of the software update	None. Do not remove the battery or attempt to power off the phone while this is displayed. Doing so may require the phone to be returned to Avaya to be recovered.
Duplicate IP	The Wireless Telephone has detected another device with its same IP address	If using DHCP, check that the DHCP server is properly configured to avoid duplicate addresses. If using Static IP, check that the Wireless Telephone was assigned a unique address
Erase Failed	Download process failed to erase the memory in the Wireless Telephone.	Operation will retry but may eventually report the error "int. error: 0F" Power cycle the phone.
Erasing Memory	Wireless Telephone has determined that a download should occur and is erasing the current software from memory.	None. When the progress bar fills the display line the erase operation is complete.
Initializing …	The Wireless Telephone is performing power on initialization	None. This is informational only.
Internal Err. # #	The Wireless Telephone has detected a fault from which it cannot recover.	Record the error code so it can be reported. Turn the Wireless Telephone off then on again. If error persists, try registering a different Wireless Telephone to this telephone port. If error still persists, contact Avaya Technical Support and report the error.
Network Busy	All APs are full or busy	Try call again later.
No PBX	Wireless Telephone not administered on the Avaya Call Server	Wireless Telephone not properly configured. Verify that extension and password in the Wireless Telephone match those administered in the Avaya Call Server.
	The Avaya Call Server is not working	Verify that the Avaya Call Server is operational. If so, follow standard troubleshooting procedures for the Avaya Call Server.
	No LAN connection at the AP or the Avaya Call Server	Verify the Avaya Call Server connection to LAN and all APs.
	Wireless Telephone can’t locate the Avaya Call Server	IP address configuration of the Avaya Call Server is wrong or missing.

Message	Description	Action
No Host IP	The Wireless Telephone is configured for “static IP” (as opposed to “use DHCP”) and no valid host IP address (the Wireless Telephone’s IP address) has been entered.	Enter a valid IP address in the configuration settings or change to “use DHCP”.
No IP Address	Invalid IP	Check the IP address of the Wireless Telephone and re-configure if required.
No Net Access	• Cannot authenticate / associate with AP • Incorrect WEP settings	Verify the AP configuration. Verify that all the WEP settings in the Wireless Telephone match those in the APs.
No Net Found	This indicates any of the following: • No radio link • No ESSID – Autolearn not supported (or) Incorrect ESSID • Out of range	 Verify that the AP is turned on. Verify the ESSID of the wireless LAN and enter or Autolearn it again if required. Try getting closer to an AP. Check to see if other Wireless Telephones are working within the same range of an AP. If so, check the ESSID of this Wireless Telephone.
No Reg Domain	Regulatory Domain not set	Configure the Regulatory Domain of the Wireless Telephone
No SVP IP	The Wireless Telephone is configured for “static IP” (as opposed to “use DHCP”) and no valid Avaya Voice Priority Processor address has been entered.	Enter a valid Avaya Voice Priority Processor IP address in the configuration setting or change to “use DHCP.”
No SVP Response	The Avaya Voice Priority Processor is not responding to requests from the Wireless Telephone.	This may be caused by bad radio reception or a problem with the Avaya Voice Priority Processor. The Wireless Telephone will keep trying to fix the problem for 20 seconds, and the message may clear by itself. If it does not, the Wireless Telephone will restart. Report this problem to the system administrator if it keeps happening.
No SVP Server	Wireless Telephone can’t locate Avaya Voice Priority Processor	IP address configuration of Avaya Voice Priority Processor is wrong or missing.
	Avaya Voice Priority Processor is not working	Check error status screen on Avaya Voice Priority Processor.

Message	Description	Action
No SVP Server (con't)	No LAN connection at the Avaya Voice Priority Processor	Verify Avaya Voice Priority Processor connection to LAN.
No SVC	Wireless telephone is not communicating with the AP, Avaya Call Server.	This message may display with another diagnostic message. Follow diagnostic actions for the second message (such as No Net Found.)
Not Installed!	A required software component is missing	Check that all required software files are on the TFTP server, if over-the-air downloading is being used. If the error repeats, contact Avaya Technical Support.
Server Busy	Wireless Telephone is attempting to download from a TFTP Server that is busy downloading other devices and refusing additional downloads.	None, the Wireless Telephone will automatically retry the download every few seconds.
SVP Service Rej.	The Avaya Voice Priority Processor has rejected a request from the Wireless Telephone	The Wireless Telephone will restart and attempt to re-register with the Avaya Voice Priority Processor, which should fix the problem. Report to your administrator if it keeps happening.
System Locked (with Busy Tone)	Avaya Voice Priority Processor is locked	Try call again later, system has been locked for maintenance
System Busy (with Busy Tone)	Avaya Voice Priority Processor is busy or out of resources	All call paths are in use, try call again in a few minutes.
TFTP ERROR(x):yy	A failure has occurred during a TFTP software download. (x) = The file number which was being downloaded; yy is an error code describing the particular failure. Possible error codes are: 01 = TFTP server did not find the requested file. 02 = Access violation (reported from TFTP server). 07 = TFTP server reported "No such user" error. 81 = File put into memory did not CRC. FF = Timeout error. TFTP server did not respond within a specified period of time.	Error code 01, 02 or 07 - check the TFTP server configuration. Error code 81, the Wireless Telephone will attempt to download the file again. For other messages, power off the Wireless Telephone, then turn it on again to retry the download. If the error repeats, note it and contact Avaya Technical Support.

Message	Description	Action
Updating Code…	Wireless Telephone is downloading new software into memory. The number icons at the bottom of the display indicate which file number is currently being downloaded.	None. When the progress bar fills the display line the update operation is complete on that file.
Updating …	The Wireless Telephone is internally updating its software images	None. The Wireless Telephone may do this briefly after a download. This is informational only.
Waiting…	Wireless Telephone has attempted some operation several times and failed	None. The Wireless Telephone is waiting for a specified period of time before attempting that operation again.

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